3. SPECIAL PROJECTS AND REPORTS

A. Dismantling of Ships (Basel/UNEP)

The 6th meeting of the Conference of Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, United Nations Environment Programme (UNEP), was held in Geneva at the United Nations Palais des Nations from December 9-14, 2002. Among its numerous actions, the Conference of Parties adopted the *Technical Guidelines for the Environmentally Sound Management of the Full and Partial Dismantling of Ships* (UNEP/CHW.6/23). This document was prepared to provide guidance to countries that have or wish to establish facilities for ship dismantling. These guidelines provide information and recommendations on procedures, processes, and practices that must be implemented to attain environmentally sound management (ESM) at such facilities. They also provide advice on monitoring and verification of environmental performance. All ship dismantling facilities should comply with the principles of ESM.

These guidelines do not currently address measures to minimize the hazardous materials aboard a ship prior to it being sent to a ship recycling facility. However, Basel Convention parties believe that such waste minimization guidelines are an important part of addressing the problems associated with ship recycling. The Marine Environment Protection Committee (MEPC) of the International Maritime Organization (IMO) is addressing this and related issues. Further, these guidelines do not deal in depth with the occupational safety and health aspects of ship recycling. The International Labor Organization (ILO) has undertaken an effort to prepare such guidelines.

The successful establishment of ESM for a ship-dismantling facility requires the establishment of an environmental management plan (EMP). The EMP is an all-encompassing document covering all environmental issues at a macro-scale and includes: (1) the assessment of potential impacts; (2) the formulation of potential preventative measures; and (3) an environmental management system (EMS), including a waste management plan, a contingency preparedness plan, and a monitoring plan.

An EMS encompasses many elements that are helpful for improvement of the environmental performance, such as: (1) the identification and prioritizing of environmental aspects; (2) an environmental policy that includes a commitment to continual improvement and prevention of pollution; (3) environmental objectives and targets for each function and level in the organization: (4) an environmental management program, including the responsibility, means, and time-frame for achieving the objectives and targets, as well as training and awareness of the workers; (5) identification of all operations and activities associated with environmental aspects; (6) establishment and maintenance of procedures that cover situations that could lead to deviations from the environmental policy; and (7) carrying out monitoring and measurements in order to record actual environmental performance and conformance with the objectives and targets laid out in the environmental policy, as well as compliance with relevant environmental regulations.

The management of wastes is the collection, transport, and disposal of hazardous wastes or other wastes, including after-care of disposal sites. The hierarchy of approaches in waste management in its simplest form can be described as follows: (1) the first priority in waste management should be to prevent waste generation; (2) the non-hazardous waste that is produced after implementing prevention measures should be re-used or recycled as far as possible; and (3) if prevention and recycling are not possible, the waste should be disposed of in a controlled manner, and in accordance with international law.

For further information, contact Mr. Michael Williams, Information Officer, United Nations Environment Programme, International Environment House, 13-15 Chemin des Anemones, CH-1219 Chatelaine, Geneva, Switzerland, (telephone: (41 22) 917-8242, electronic mail: michael.williams@unep.ch).

B. Security Preparedness at Chemical Facilities (GAO)

The U.S. General Accounting Office (GAO) has released a report (GAO-03-439) dated March 2003 and titled *Homeland Security: Voluntary Initiatives Are Under Way at Chemical Facilities, but the Extent of Security Preparedness Is Unknown*. Chemical facilities may be attractive targets for terrorists intent on causing economic harm and loss of life. Many facilities exist in populated areas where a chemical release could threaten thousands. The U.S. Environmental Protection Agency (EPA) reports that 123 chemical facilities located throughout the nation have toxic "worst-case" scenarios where more than a million people in the surrounding area could be at risk of exposure to a cloud of toxic gas if a release occurred. To date, no one has comprehensively assessed the security of chemical facilities.

No federal laws explicitly require that chemical facilities assess vulnerabilities or take security actions to safeguard these facilities from attack. However, a number of federal laws impose safety requirements on facilities that may help mitigate the effects of a terrorist-caused chemical release. EPA believes that the Clean Air Act could be interpreted to provide authority to require chemical facilities to assess their vulnerabilities and to make security enhancements that protect against attacks. However, EPA has not attempted to use these Clean Air Act provisions because of concerns that this interpretation would pose significant litigation risk and has concluded that chemical facility security would be more effectively addressed by passage of specific legislation.

The federal government has not comprehensively assessed the chemical industry's vulnerabilities to terrorist attacks. EPA, the U.S. Department of Homeland Security (DHS), and the U.S. Department of Justice (DOJ) have taken preliminary steps to assist the industry in its preparedness efforts, but no agency monitors or documents the extent to which chemical facilities have implemented security measures. Consequently, federal, state, and local entities lack comprehensive information on the vulnerabilities facing the industry.

To its credit, the chemical industry, led by its industry associations, has undertaken a number of voluntary initiatives to address security at facilities. The industry faces a number of challenges in preparing facilities against attacks, including ensuring that all chemical facilities address security concerns. Despite the industry's voluntary efforts, the extent of security preparedness at

U.S. chemical facilities is unknown. Finally, both the DHS Secretary and the EPA Administrator have stated that voluntary efforts alone are not sufficient to assure the public of industry's preparedness. This report recommends that the DHS Secretary and the EPA Administrator jointly develop a comprehensive national chemical security strategy, which is both practical and cost effective and which includes assessing vulnerabilities and enhancing security preparedness.

For further information, contact Mr. John Stephenson, Director, Natural Resources and Environment, U.S. General Accounting Office, 441 G Street, NW, Washington, DC 20548, (telephone: (202) 512-3841, electronic mail: stephensonj@gao.gov). For a copy of the report, refer to the following GAO Internet Web Link: http://www.gao.gov/cgi-bin/getrpt?gao-03-439.

C. Great Lakes Program for Environmental and Economic Prosperity (GLC)

The Great Lakes Commission (GLC) has presented to the 108th U.S. Congress its descriptive listing of federal legislative and appropriations priorities titled *Great Lakes Program to Ensure Environmental and Economic Prosperity*. Dated March 2003, the Program is an important step toward the development of a large scale, long-term Great Lakes Restoration Plan. Such a consensus-based plan will yield a detailed blueprint of unprecedented scope that will guide state/federal/stakeholder partnerships for years into the future. Toward this end, the GLC calls for a multi-year federal appropriation to provide for Great Lakes Restoration Plan development under the leadership of the Council of Great Lakes Governors with input from the larger Great Lakes community.

GLC priorities for the 108th U.S. Congress are as follows:

1. Cleaning up toxic hot spots: Restore and maintain beneficial uses in each of the 31 U.S. and binational Areas of Concern, with a special emphasis on remediation of contaminated sediments. The remediation of contaminated sediments through environmental dredging and the application of other technologies is a key step toward restoration of beneficial uses and delisting of Areas of Concern.

2. Shutting the door on invasive species: Restore and protect the ecological and economic health of the Great Lakes by preventing the introduction of new invasive species and limiting the spread of established ones. Invasive species are a growing and potentially devastating threat to the economy and environment of the Great Lakes region.

3. Controlling nonpoint source pollution: Improve Great Lakes water quality and economic productivity by controlling nonpoint source pollution from water, land, and air pathways. Irresponsible resource-use practices are particularly damaging because they simultaneously degrade the environment and compromise the economic use and value of the resource.

4. Restoring and conserving wetlands and critical coastal habitat: Restore 100,000 acres of wetlands and critical coastal habitat while protecting existing, high quality fish and wildlife habitat in the Great Lakes basin. Wetlands and coastal marshes provide critical habitat for

fish and wildlife, help store and cycle nutrients, prevent erosion of soil and shorelines, and provide a tremendous recreational value to the region.

5. Ensuring the sustainable use of Great Lakes water resources: Ensure the sustainable use and management of Great Lakes water resources to protect environmental quality and provide for water-based economic activity in the Great Lakes states. The federal government, in partnership with the Great Lakes states, must ensure regional prosperity through programs that strengthen the ability to manage water resources for environmentally sound, sustainable use.

6. Strengthening the decision support capability: Meet domestic and international Great Lakes commitments through adequate funding for, and the efficient and targeted operation of, federally funded management and research agencies. Benefits will accrue to the environment and economy, including numerous multi-billion dollar-a-year industries in the region, such as sport fishing, recreational boating and water-based tourism.

7. Enhancing the commercial and recreational value of Great Lakes waterways: Maximize the commercial and recreational value of Great Lakes waterways and other coastal areas by maintaining and constructing critical infrastructure and implementing programs for sustainable use. Studies show that waterborne transportation on the Great Lakes is preferable to rail and over-the-road options from pollutant emissions, fuel efficiency, and safety standpoints.

For further information, contact Dr. Michael J. Donahue, President/CEO, Great Lakes Commission, 2805 S. Industrial Highway, Suite 100, Ann Arbor, MI 48104-6791, (telephone: (734-971-9135, electronic mail: mdonahue@glc.org) or refer to the GLC Internet Web Site: http://www.glc.org.

D. MARAD Loan Guarantee Program (OIG/DOT)

The Office of the Inspector General (OIG), U.S. Department of Transportation (DOT), has issued an audit report (CR-2003-031) dated March 27, 2003, regarding the Maritime Administration (MARAD) Title XI Loan Guarantee Program. Title XI of the Merchant Marine Act of 1936, as amended, established the Federal Ship Financing Guarantee Program to assist private companies in obtaining financing for the construction of ships or the modernization of U.S. shipyards. This Program authorizes the federal government to guarantee full payment to the lender of the unpaid principal and interest of a mortgage obligation in the event of default by a vessel or shipyard owner.

To improve MARAD's administration and oversight of the Program, OIG has concluded that MARAD needs to limit losses to the federal government through: (1) more effective oversight of the Program's loan application review and approval process, including compensating provisions and collateral; (2) more rigorous financial oversight of borrowers during the term of the loan guarantee; (3) better monitoring and protection of vessels and shipyards while under a loan guarantee; and (4) more effective stewardship of foreclosed assets.

The report's recommendations are as follows:

1. Require a rigorous analysis of the risks from modifying any loan approval criteria and impose compensating provisions on the loan guarantee to mitigate those risks.

2. Formally establish an external review process as a check on MARAD's internal loan application review and as assistance in crafting loan conditions and covenants;

3. Establish a formal process for continuously monitoring the financial condition of borrowers, including requirements for financial reporting over the term of the guarantee as a condition of loan approval;

4. Establish a formal process for continuously monitoring the physical condition of guaranteed assets over the term of the loan guarantee; and

5. Develop an improved process for monitoring the physical condition of foreclosed assets and for recovering the maximum amount of funds from their disposal.

OIG notes that MARAD is cognizant of the need for improved oversight of the Title XI Program and is in agreement with the five recommendations for improving oversight. For further information, contact Mr. Kenneth Mead, Inspector General, Office of the Secretary, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, DC 20590, (telephone: (202) 366-1959, electronic mail: kenneth.mead@oig.dot.gov). The audit report can be accessed at the following Internet Web Address: http://www.oig.dot.gov/show_pdf.php?id=1058.

E. Reducing Congestion (GAO)

The U.S. General Accounting Office (GAO) has published a report (GAO-03-735T) titled *Reducing Congestion: Congestion Pricing Has Promise for Improving Use of Transportation Infrastructure*. Traffic on already congested surface, maritime, and air transportation systems is expected to grow substantially over the next decade. This congestion can be considered a shortage; it occurs when more services – from lanes of highway, airport runways, locks on rivers – are demanded than can be supplied at a given time and place. A range of approaches and tools must be applied to solve the pervasive transportation congestion problems that the United States faces in the next decade and beyond. Congestion pricing – although only one of several approaches that can be used to reduce congestion on U.S. roads, airways, and waterways – shows promise in reducing congestion and better ensuring that existing transportation systems are used efficiently.

Congestion pricing can potentially reduce congestion by providing incentives for drivers to shift trips to off-peak periods, use less congested routes, or use alternative modes, thereby spreading out demand for available transportation infrastructure. Congestion pricing also has the potential to create other benefits, such as generating revenue to help fund transportation investment. Possible challenges to implementing congestion pricing include current statutory restrictions limiting the use of congestion pricing, and concerns about equity and fairness across income

groups. In theory, equity and fairness concerns could be mitigated depending on how the revenues that are generated are used.

Evidence from projects in the United States and abroad shows that this approach can reduce congestion. Such projects have also shown that they can generate sufficient revenue to fund operations – and sometimes fund other transportation investment as well. However, projects were not necessarily able to demonstrate benefits for the full range of transportation users. Nonetheless, there is some evidence that equity and fairness concerns can be mitigated. Some projects have shown substantial usage by low-income groups, and other projects have used revenues generated to subsidize low-cost transportation options. In addition, some recent proposals for refining congestion-pricing techniques have incorporated further strategies for overcoming equity concerns.

For further information, contact JayEtta Hecker, Director, Physical Infrastructure Issues, U.S. General Accounting Office, 441 G Street, NW, Washington, DC 20548, (telephone: (202) 512-8984, electronic mail: heckerj@gao.gov), or refer to the following GAO Internet Web Link: http://www.gao.gov/cgi-bin/getrpt?gao-03-735t.

F. Prevention of Air Pollution from Ships (White House)

On May 15, 2003, President George W. Bush transmitted to the U.S. Senate, for its advice and consent, the Protocol of 1997 to Amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78 or MARPOL Convention). The Protocol of 1997 would add Annex VI (regulations for the prevention of air pollution from ships) to MARPOL 73/78. Also enclosed for the information of the Senate was the report of the U.S. Department of State and its attached analysis of the Protocol of 1997, as well as resolution 2 of the 1997 MARPOL Conference with its annexed Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines.

MARPOL 73/78 is an international treaty of the International Maritime Organization (IMO) addressing the control of pollution from ships. It currently has five annexes dealing with oil (Annex I), noxious liquid substances in bulk (Annex II), harmful substances in packaged form (Annex III), sewage (Annex IV), and garbage (Annex V). The United States is party to all of these annexes except Annex IV. Annex VI addresses the prevention of air pollution from ships by limiting the emissions of nitrogen oxides from marine diesel engines, controlling the sulfur content of marine diesel fuel, prohibiting the emissions of ozone-depleting substances, regulating the emissions of volatile organic compounds during the transfer of cargoes, setting standards for shipboard incinerators and fuel oil quality, and establishing requirements for platforms and drilling rigs at sea.

For further information on this action, refer to the following White House Internet Web Link: http://www.whitehouse.gov/news/releases/2003/05/20030515-12.html.

G. Reducing Greenhouse Gas Emissions from U.S. Transportation (Pew Center)

The Pew Center on Climate Change has published a report dated May 2003 and titled *Reducing Greenhouse Gas Emissions from U.S. Transportation*. In the U.S. economy, transportation is second only to electricity in terms of the volume and rate of growth of greenhouse gas (GHG) emissions. In terms of carbon dioxide (CO_2), which accounts for 95 percent of transportation's GHG emissions, transportation is the largest and fastest growing end-use sector. This report evaluates potential CO_2 emission reductions from transportation in the United States. Measures considered include energy efficiency improvements, low-carbon alternative fuels, increasing the operating efficiency of the transportation system, and reducing travel.

Among the report's findings and conclusions are the following:

1. By 2015, the fuel economy of new passenger cars and light trucks can be increased up to one-third by the adoption of proven technologies, at a cost below the value of the fuel that would be saved and without reducing the size or performance of vehicles. Before 2030, advanced diesel engines, gasoline or diesel hybrid vehicles, and hydrogen-powered fuel cell vehicles will likely permit new car and light truck fuel economy to be increased by at least 50 to 100 percent, while satisfying current and future emission standards. Efficiency gains of 25 to 50 percent for new heavy trucks will likely also be possible over the next 15 to 30 years. For new aircraft, fuel economy increases of 15 to 25 percent seem feasible by 2015, reaching 25 to 40 percent by 2030.

2. Despite 25 years of effort, alternatives to petroleum have not displaced more than a few percent of petroleum fuels. Petroleum fuels are supported by an extensive and well-functioning infrastructure. They also have high energy density, low cost, and a demonstrated ability to adapt to environmental challenges. In the near term, lower-carbon alternative fuels such as natural gas and liquefied petroleum gases will continue to be viable in niche markets. Lower-carbon replacement fuels, such as alcohols or ethers produced from biomass, can be blended with gasoline to displace several percent of petroleum use. If methods of producing ethanol from cellulose can be commercialized and if current tax subsidies are continued, renewable liquid fuels blended with petroleum fuels could reduce transportation's CO_2 emissions by 2 percent by 2015 and 7 percent by 2030.

3. Technological advances in fuel cells, hydrogen production, and hydrogen storage are needed to accomplish a transition to a largely hydrogen-powered transportation system. Such a transition will also require intensive planning, major commitments by government, industry, and the public, and supportive public policies. If achieved, however, a transition to hydrogen produced from renewable or nuclear energy or from fossil resources with carbon sequestration, could eliminate most of transportation's GHG emissions sometime after 2030.

4. Mobility gives people access to opportunities and enhances the efficiency of the economy. Reducing transportation activity *per se* is not a desirable goal. Where there are environmental damages (such as GHG emissions) unaccounted for in private transportation decisions, increasing the cost of travel to reflect these impacts is beneficial from both an economic and environmental perspective. In particular, internalizing the externality of

climate change through carbon cap-and-trade systems or direct pricing of the carbon content of motor fuels is an especially attractive option. An even greater impact can be achieved by redistributing certain fixed costs of motor vehicle travel so that they fall on carbon fuels.

5. The patterns of land use and development that have evolved over many decades are inefficient from a transportation perspective. If the geography of cities can be transformed to provide equal or greater accessibility with less travel, both the environment and the economy would benefit. Experimentation and modeling analyses indicate that travel reductions of 10 percent may be achievable in the long run, without loss of accessibility. The ability to consistently achieve and sustain such reductions has not been demonstrated in the United States, and much remains to be learned about planning and realizing more transportation-efficient patterns of land use.

6. While changing behavior has the potential to reduce transportation fuel use and GHG emissions, large and sustainable reductions have never been achieved in this manner in the United States. Increasing wealth and vehicle ownership combined with decreasing household size and population densities have led to steadily declining vehicle occupancy rates. The same trends have historically contributed to declining market shares for mass transit, although mass transit ridership has been growing over the past few years. On the freight side, shippers increasingly value speed and reliability, favoring truck and air freight, the most energy-intensive modes. Still, GHG emission reductions of a few percent can be achieved with concerted effort, and much might be possible if innovative strategies could be found to increase vehicle occupancy rates without diminishing service or convenience.

For further information, contact Ms. Katie Mandes, Pew Center on Climate Change, 2101 Wilson Blvd., Suite 550, Arlington, VA 22201, (telephone: (703) 516-0606) or refer to the Pew Center's Internet Web Site: http://www.pewclimate.org.

H. America's Living Oceans (Pew Oceans Commission)

The Pew Oceans Commission has published a report dated May 2003 and titled *America's Living Oceans: Charting a Course for Sea Change*. This report presents a new direction for governing the oceans. According to the report, overfishing at sea, over-development along the coasts, and increasing pollution from cities and fields are leading to the decline of ocean wildlife and the collapse of ocean ecosystems.

Among the report's leading findings and recommendations are the following:

1. U.S. ocean policy is a hodgepodge of narrow laws that has grown by accretion over the years, often in response to crisis, and is in need of reform to reflect the substantial changes in knowledge of and values toward the oceans. The Commission calls upon the Congress and the Administration to pass a National Ocean Policy Act that embodies a national commitment to protect, maintain, and restore the living oceans.

2. Management approaches that cut across lines of jurisdiction and involve all members of the community have proven to be the most successful. The Commission calls for: (a) the establishment of an independent oceans agency to streamline federal management; (b) the creation of regional ecosystem councils to bring fishermen, scientists, citizens, and government officials together to develop ocean management plans; and (c) a national network of marine reserves to protect and restore fragile ocean habitats.

3. With half of the nation living along the coast and millions more visiting each year, people are fundamentally changing the natural ecosystems that attract them to the coasts. The Commission calls upon the Congress and the states to work together to set aside habitat critical to coastal ecosystems and to promote smart land use that protects terrestrial and marine environments. The Commission also calls for the redirection of government programs and subsidies that contribute to the degradation of the coastal environment.

4. Overfishing, wasteful bycatch, the destruction of habitat, and resulting changes in marine food webs threaten the living oceans upon which the fishing industry and heritage depend. The Commission urges the adoption of ecosystem-based management that restricts destructive fishing gear, eliminates the wasteful practice of discarding unintended catch, and places a priority on the long-term health of marine life and marine ecosystems. Central to this goal is the immediate need to separate conservation decisions from allocation decisions within the fishery management process.

5. The nutrients and toxic substances running off cities, streets, yards, and fields and emanating from smokestacks and tailpipes present the greatest pollution threat to coastal waters. The Commission calls for: (a) national standards that set nutrient pollution limits and (b) compliance with these standards and further reductions in toxic pollution using watershed-based approaches. The Commission also calls for stricter measures to abate pollution from animal feeding operations and cruise ships, and to stem the tide of invasive species arriving from overseas.

6. The Commission also: (a) urges the doubling of the federal ocean research budget, (b) calls for a new era of ocean literacy to inspire the next generation with a greater understanding of and appreciation for the oceans, and (c) calls for a moratorium on the expansion of finfish aquaculture (including salmon) until national policies and standards are in place.

For further information, contact Mr. Justin Kenney, Director of Communications, Pew Oceans Commission, 2101 Wilson Blvd., Suite 550, Arlington, VA 22201, (telephone: (703) 516-0605, electronic mail: kenneyj@pewoceans.org) or refer to the Commission's Internet Web Site: http://www.pewoceans.org.